

REMARKS

In accordance with the foregoing, claim 15 is amended. No new matter is added. Claims 1-14 remain cancelled. Claims 15-28 are pending and under consideration.

Claim 15 is amended to clarify the claimed subject matter. Applicants respectfully submit that the amended claim language does not change the intended scope of the claim and it is fully supported by the originally filed specification and claims.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 15-16, 20-22 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0147017 to Li et al. (hereinafter "Li") in view of U.S. Patent Application Publication No. 2004/001429 A1 to Ma et al. ("Ma").

On page 3 of the outstanding Office Action, it is stated that "allocating sub-carriers for data traffic channels in a cellular system ... to subscribers" reads on the allocation according to the first time period as recited in claim 15. Paragraphs [39] - [42] of Li, which are indicated as supporting the above statement, use the term "allocation" as meaning allocation of radio resources to subscribers (see, for example, "allocation of clusters to subscribers" in [0042]). In contrast, according to claim 15 recites an allocation of radio resources to radio cells. Therefore, paragraphs [39] - [42] of Li do not read on the claimed allocation according to the first time period.

Further, on page 3 of the outstanding Office Action, it is stated that "each cell has hexagonal structure with six sectors ..." as described in paragraph [103] of Li and illustrated in FIG. 8 reads on the claimed allocation according to the second time period. However, in paragraph [103], Li states that "between the cells, the frequency reuse factor is one". This distinguishes the allocation according to the second time period as recited in claim 15 from the allocation in Li, because in claim 15, each sub-carrier is used only in some but not all of the radio cells. A frequency reuse factor of one implies that each sub-carrier is used in each radio cell which is in contradiction to allocation according to the second time period as recited in claim 15. Therefore, the paragraph [103] of Li cited by the Examiner does not read on the claimed allocation according to the second time period.

On page 4 of the Office Action, it is submitted that Li fails to teach that the sub-carriers are allocated differently during different periods of time, but Ma is invoked to compensate for Li's

admitted failure to disclose all the features of claim 15. Ma's paragraphs [124] and [125] disclose two different modes are used in method used for communicating over a shared OFDMA band:

- Mode-1 provides circuit oriented connectivity for multiple users simultaneously;
- Mode-2 provides higher rate bursty packet connectivity.

Figure 2 of Ma illustrates such an allocation of the sub-carriers. The hatched circles correspond to Mode-1 sub-carriers, the others correspond to Mode-2 sub-carriers. However, Ma does not refer to the allocation of sub-carriers to radio cells, but to the allocation of sub-carriers to modes. Ma does not teach or suggest the allocation as recited in claim 1 for the first time period, or the allocation as recited in claim 1 for the second time period. Therefore, although Ma describes an allocation changing in time, it does not read on claim 15.

In the last paragraph of page 4 continuing at the beginning of page 5, it is stated that Ma "[reads] on the claimed 'allocating radio resources for at least one frequency band having sub-carriers, to make the sub-carriers of the at least one frequency band temporarily available during a first time period, and allocating the radio resources to the radio cells during a second time period'." Claim 15 is misquoted the alleged citation being a mixture of the features and elements of the allocation during "first time period" and the allocation during "second time period". This altered language attributed to claim 15 makes it difficult to rebut the obviousness rejection supported by statements that compares prior art reference with the altered language.

Additionally, Applicants respectfully traverse the obviousness rejection based on Li and Ma because there is insufficient evidence for a motivation to modify Li's communication method by incorporating Ma's dynamical sub-carriers allocation. The position that Li's method can be modified to arrive at the method of claim 15 is insufficient to establish a *prima facie* case of obviousness.¹

Accordingly, Applicant respectfully traverses, and requests reconsideration of claim 15's rejection based on Li and Ma.²

Dependent claims 16-26 patentably distinguish over the cited prior art at least by inheriting patentable features from independent claim 15 from which they depend.

¹See MPEP 2143.01 stating that the "fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness"; see also same section stating "[a]lthough a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so,'" (citation omitted).

² See MPEP 2142 stating, as one of the three "basic criteria [that] must be met" in order to establish a *prima facie* case of obviousness, that "the prior art reference (or references when combined) must teach or suggest all the claim limitations," (emphasis added).

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Ma, and in further view of U.S. Patent No. 6,917,580 B2 to Wang et al. ("Wang").

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Ma and in further view of U.S. Patent No. 5,726,978 to Frodigh et al. ("Frodigh").

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Li and Ma, in view of Frodigh, and in further view of U.S. Patent Application Publication No. 2002/0082016 A1 to Obayashi ("Obayashi").

The additionally cited references, Wang, Frodigh, and Obayashi, do not correct or compensate the above identified failure of Li and Ma to disclose all the features of independent claim 15.

Independent claim 27, which is directed to a radio communication system, is patentable at least because the cited prior art fails to teach or suggest

"at least one control device assigning the sub-carriers of the at least one frequency band to said at least two radio cells during a first time period to make all of the sub-carriers temporarily available to each radio cell for transmission of information, and that during a second time period temporarily each of the sub-carriers is available to a subset of the at least two radio cells for transmission of information."

Independent claim 28, which is directed to a control device of a radio communication system of cellular construction, is also patentable at least by reciting

- means for temporarily assigning the sub-carriers of the at least one frequency band to the at least two radio cells during a first time period so that the sub-carriers are temporarily available to each radio cell for the transmission of the information; and
- means for temporarily assigning the sub-carriers of the at least one frequency band among the at least two radio cells during a second time period so that each of the sub-carriers is temporarily available to a subset of the at least two radio cells for the transmission of the information.

CONCLUSION

Applicants respectfully request entry of this Rule 116 Response and Request for Reconsideration because the amendment of claim 15 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised.

Serial No. 10/532,346

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Feb. 09, 2007

By: L.Todor
Luminita A. Todor
Registration No. 57,639

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501